

already referred to. These provide interesting reading, and will go far to compensate for the deficiencies of the book in other respects.

The plates seem on the whole well up to the average. In some of the figures we miss that attention to structural detail which was to be expected from an artist who is at the same time the author of a work on entomology. The beetle represented at fig. 2, pl. ii., as having three-jointed tarsi and six-jointed antennæ gives a very erroneous idea of the characters of the family Tenebrionidæ, to which it is said to belong. The neuration of the wings is, in some cases also, less accurate than is desirable in a work where the beginner has to rely almost wholly upon the figures for the identification of the species as well as for a knowledge of the structural characters of families. This leads us to notice that the author has introduced into the book a certain number of species which he refers to as new. He figures but does not describe them, nor does he give any clue as to where descriptions of them may be found. If he wishes to obtain recognition from the systematic entomologist for the names he has given to these species he would do well to publish brief technical descriptions of them.

Notwithstanding the defects pointed out we trust that this work may succeed in the purpose for which it was written, of inducing the youths of New Zealand to take a more active interest in entomological science.

*On the Modifications of Organisms.* By DAVID SYME. Melbourne: George Robinson and Co. London: Kegan Paul, Trench, and Co.

SOME idea of the spirit of this book may be gathered from the following sentence:—"Darwin describes the action of natural selection as preservative and accumulative, but properly speaking it is a purely destructive process. It is heredity and not natural selection which is preservative and accumulative."

In a very vigorous fashion Mr. Syme denies almost every statement which Darwin relied on, maintaining that he "has practically abandoned his theory altogether when he admits that the tendency to vary in the same manner is so strong that whole species may be modified without the aid of any form of natural selection." He asserts that "Darwin's language is wanting in precision, and his definitions and theories are variable and contradictory," even to forgetting his own statement of what natural selection is. The survival of the fittest should be the result of natural selection or the struggle for life; yet Darwin uses the three terms as synonymous. But, according to Mr. Syme, "it is the organism which struggles, not, however, to select this or that variation, but to adapt itself to its environment." Darwin, with good reason (except, perhaps, as to

size and colour), was not disposed to give the environment much weight.

"One of the most singular of Darwin's conclusions" is, says Mr. Syme, "that it is the female that selects the male, and not the male that selects the female;" yet on the next page we find that "the female selects the handsomest and most valiant male:" further, that the sexual struggle is not between the males, but "is rather a struggle between the opposite sexes." Much that has been written on this subject is purely conjectural.

The following will probably be new to many:—"Butterflies put up their wings and expose their underside to the action of the sun;" they "have their brilliant non-protective tints on the upper surface of their wings, while the underside is almost invariably protectively coloured." Again, "when chased," we are told, "they suddenly disappear by alighting on some object coloured like themselves, whereby they escape observation, and so confident are they that they remain motionless even when an enemy approaches within a few inches of them."

One of the objections to natural selection—unnoticed by Mr. Syme, but not unnoticed by Darwin himself—is the diversity of means for the same end.

The fertilization of plants by insects is discussed at length. Darwin believed that their relationship was mutually beneficial. Mr. Syme, on the contrary, asserts "that insects of all kinds are in various ways destructive to plants," and he denies that flowers owe their conspicuous colours to insects.

There is no date and there is no index to this book, which only consists of 164 pages. There are several misspellings—such as "englossa," "Artimia," "strachys," "belliafolia," "decimation," &c.; printed in London, and the author probably in Melbourne, may sufficiently account for such errors. Nevertheless we shall be glad to see Mr. Syme again; right or wrong, his book is undoubtedly suggestive.

## MISCELLANEOUS.

### *Some Anatomical Characters of Hyperoodon rostratus.*

By M. E.-L. BOUVIER.

I HAVE had the opportunity of studying, at the marine laboratory of Saint-Vaast, a female *Hyperoodon*, measuring 7.20 m. in length, which had stranded on the beach near Fort de la Hougue.

The animal had a short time previously given birth to a young one; its mammae were full of milk, the internal organs of generation